



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,409	09/08/2006	Michiel Arjaan Kousemaker	KOUSEMAKER ET AL-1PCT	6090
25889	7590	09/11/2009	EXAMINER	
COLLARD & ROE, P.C.				
1077 NORTHERN BOULEVARD				
ROSLYN, NY 11576				
			ART UNIT	PAPER NUMBER
			1797	
			MAIL DATE	DELIVERY MODE
			09/11/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,409

Applicant(s)

KOUSEMAKER ET AL.

Examiner

MING CHEUNG PO

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Office Action Summary

1. This is the initial office action in response to application 10/562409 filed on 09/08/2006.
2. Claims 1 – 14 are pending and have been fully considered.

Claim Rejections - 35 USC § 112/101

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 5-7, 10 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claims 5-7 describe that "the raw materials for producing the oxygen-containing compound are selected in such a way" to impart certain properties to the oxygen-containing compound. However, it is unclear what such a way is.
6. Claim 10 describes the oxygen-containing compound has a purity of more than 95%. It is unclear if applicant is suggesting that the oxygen-containing compound contains more than 95% of a certain other compound or if the oxygen-containing compound itself contains more than 95% of itself.
7. Claim 13 provides for the use of "the oxygen-containing compound", but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it

merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WESSENDORF (EP 0718270 A2).

There is no English equivalent for WESSENDORF. However, a machine translation has been attached.

Regarding claims 1 – 4, 8 – 9, 11 and 12, WESSENDORF teaches in example 4 a reaction with **glycerin**, **acetone** and **i-butene**. WESSENDORF further teaches in lines 1- 10 of page 7; 2,2-dimethyl-4-hydroxymethyl-1,3-dioxolan.

WESSENDORF does not seem to explicitly teach etherification of the still free hydroxyl groups of the acetal produced.

However, it would be obvious to one of ordinary skill in the art that the 2,2-

dimethyl-4-hydroxymethyl-1,3-dioxolan would react with the i-butene to form ethers.

Therefore the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

WESSENDORF further states that the compound produced may be added to gasoline in the 6th paragraph of page 2 of the translation.

Regarding claims 5 – 7, WESSENDORF does not seem to explicitly state how the raw materials are selected such that the compound dissolves completely in fuel, such that it does not exert a negative influence on the flash point and that it does not increase the water solubility of fuel that it is added to.

However, since the raw materials must inherently be able to be selected in a way to grant the resultant compound such properties.

It would be obvious to one of ordinary skill in the art to select such a way in order to grant these beneficial properties to the compound that WEESENDORF forms.

Regarding claim 10, WESSENDORF does not seem to explicitly state that the oxygen-containing compound has a purity of more than 95%.

However, it would be a matter of obvious skill in the art to optimize the product yield formed.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Regarding claim 13 and 14, WESSENDORF does not seem to explicitly state the use of the compound as an additive in fuels in an amount from 0.1 – 30 % by volume.

However, WESSENDORF does teach that the compound may be used in fuels

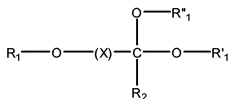
such as gasoline.

It would be obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are known, optimization or workable ranges involves only routine skill in the art.

10. Claims 8–14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GERMANAUD (US 6,113,661).

GERMANAUD does not seem to explicitly teach an oxygen-containing compound used as fuel additive comprising reaction of a multivalent alcohol with aldehyde or ketone to produce an acetal, and etherification of the still free hydroxyl groups Of the acetal produced with tertiary olefins.

However, GERMANAUD teaches a fuel composition containing, as a major portion, at least one fuel base, and, as a minor portion, at least one oxygenated compound, which contains at least 0.05% by weight of at least one trialkoxyalkane of the formula (I)



wherein: X is a divalent hydrocarbon-containing group C_nH_{2n} , where n is 1, 2, or 3, each hydrogen atom optionally being substituted by a hydrocarbon-containing residue.

R_1 , R'_1 , and R''_1 are each independently linear or branched alkyl groups containing from 1 to 10 carbon atoms and optionally at least one oxygen atom, two of

each of R₁, R'₁, and R''₁ groups optionally being connected to form a heterocyclic ring containing 5 or 6 atoms.

R₂ is a hydrogen atom or a linear C₁- C₄ alkyl radical.

When n is 1, R'₁ and R''₁ are connected to form a 5 membered ring, R₁ is tert-butyl group, and R₂ is a hydrogen atom, 2, 2-dimethyl-4-hydroxymethyl-1, 3 dioxolan-tert butyl ether is formed.

Applicants are reminded that claims 8 – 14 are product by process claims. Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on its method of production. See MPEP 2113

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Regarding claim 10, GERMANAUD does not seem to explicitly teach the purity of the compound.

However, it would be obvious to one of ordinary skill in the art to use the compound that is reactive and isolate it from other products formed during synthesis. One of ordinary in the art would therefore use as pure a compound as can be used such as more than 95%.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Regarding claims 13 and 14, GERMANAUD does not seem to explicitly state the volume of the oxygenated compound used.

However, GERMANAUD does teach in lines 25 – 28 of column 3 that the fuel composition contains from 0.05 to 40% by weight of the compound of formula (I).

It would be obvious to one of ordinary skill in the art to use 0.1 to 30% by volume since it has been held that where the general conditions of a claim is known, optimization or workable ranges involves only routine skill in the art. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. DELFORT (US 6,890,364) teaches a diesel fuel compound that has major proportion of at least one diesel fuel and a minor proportion of at least one glycerol acetal. DELFORT also teaches that the free hydroxyl group of the acetal may be substituted with an ether. DELFORT does not appear to teach reacting the acetal with an olefin to form an ether.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MING CHEUNG PO whose telephone number is (571)270-5552. The examiner can normally be reached on 9:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/
Primary Examiner, Art Unit 1797

Ming Cheung Po
Patent Examiner